1. Lucinda bought a dozen eggs on three different occasions. The average cost per dozen was $1.18. 1.18, 1.18, 1.18 1.18, 1.19, 1.17
1.13, 1.23, 1.18 1.00, 2.00, 0.54

Give several different possible combinations for what the costs might have been for the different purchases. $1.18 \cdot 3 = 3.54$

2. Two classes took an exam. In the first class, the average score was exactly 78%. In the second class, the average score was exactly 86%. But when the two classes were treated as one large group, the average was not 82%.

a. How is this possible? different # of ppl

b. What's the highest that the combined average could be? What's the lowest?

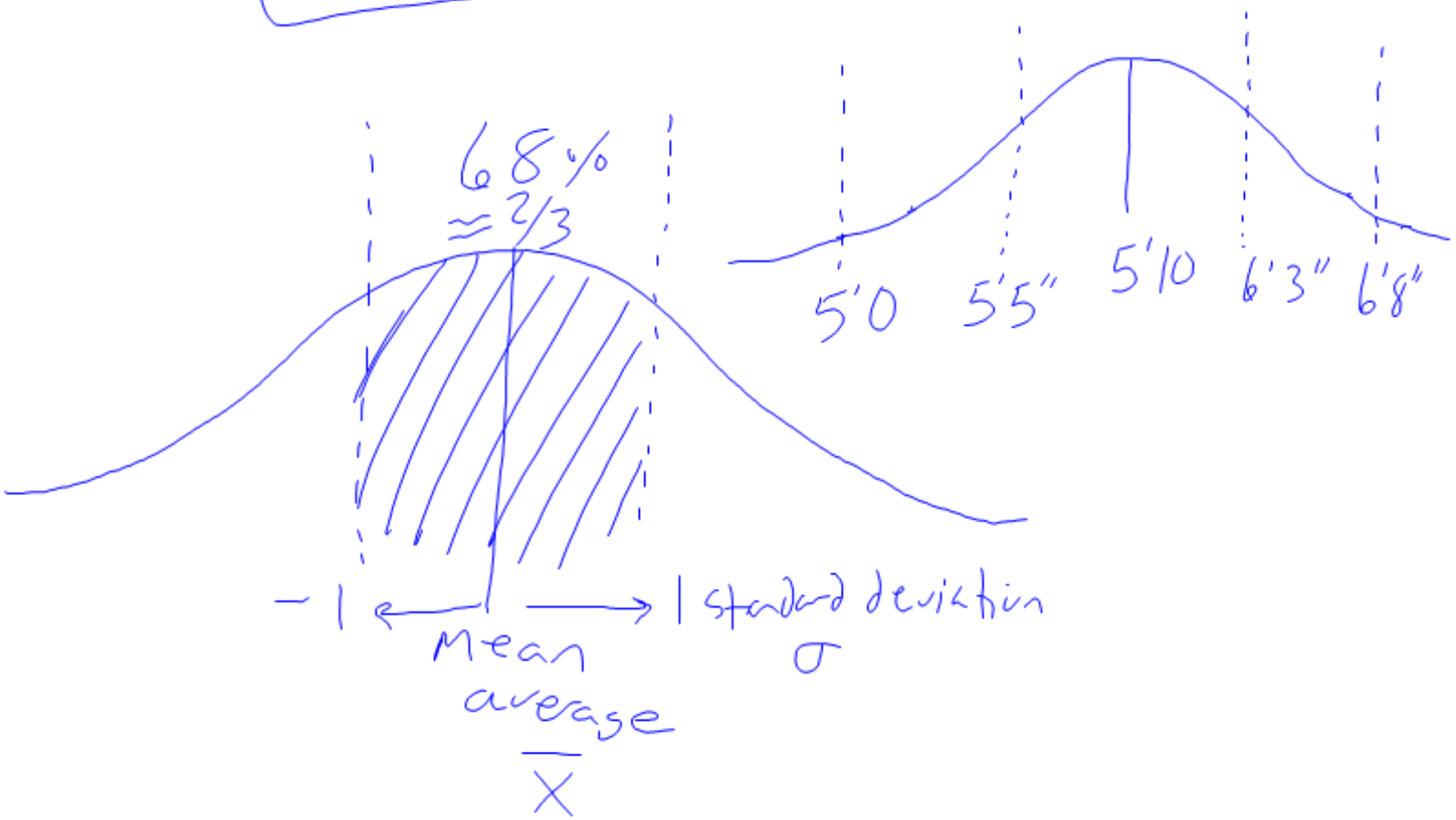
c. Under what circumstances would the average of the two class averages be the same as the average you get when you treat the two classes as one large group? Explain your answer and be as complete as you can.

Be sure to justify your answers.

3. Garrison Keillor describes Lake Wobegon as a place where "the children are all above average."

Suppose someone measured all 85 ten-year-olds in the town and found that their average height was 4 feet 7 inches.

Standard Deviation



Standard Deviation

x	$x-\bar{x}$	$(x-\bar{x})^2$
5	-6	36
8	-3	9
10	-1	1
14	3	9
18	7	49

1. Find Mean($\bar{x}$)
2. Subtract mean from each #
3. Square each result
4. average the squares
5. $\sqrt{}$ result

$$\sigma = \sqrt{\frac{\sum_{i=1}^{n}(x_i-\bar{x})^2}{n}}$$

$\bar{x} = 11$

Sum = 104

Average = 20.8

$\sqrt{\text{Avg}} \approx 4.56$

Find σ for

(1) A: 19, 19, 20, 20, 21, 21 $\sigma = 0.816$

(4) B: 10, 10, 20, 20, 30, 30 $\sigma = 8.164$

(3) C: 12, 13, 13, 27, 27, 28 $\sigma = 7.348$

(2) D: 9, 20, 20, 20, 20, 31 $\sigma = 6.350$

ADCB

Turn in

1. Worksheet from 5.6
2. Today's work

HW

HW #13 p. 346, in booklet